

(43) International Publication Date
18 August 2005 (18.08.2005)

PCT

(10) International Publication Number
WO 2005/076062 A1

(51) International Patent Classification⁷: G02F 1/167,
G09G 3/34

JOHNSON, Mark, T. [GB/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **BAESJOU, Patrick, J.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **NIESSEN, Eduard, M.; J.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(21) International Application Number: PCT/IB2005/050362

(22) International Filing Date: 27 January 2005 (27.01.2005)

(74) Agents: ROLFES, Johannes, G., A. et al.; Prof. Holstlaan 6. NL-5656 AA Eindhoven (NL).

(25) Filing Language: English

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
04100441.7 6 February 2004 (06.02.2004) EP

(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

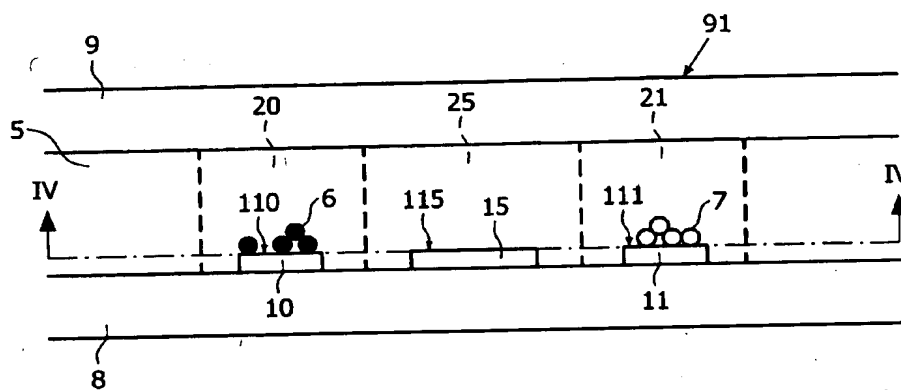
(72) Inventors; and

(75) **Investors/Applicants (for US only):** **DUINE, Peter, A.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **BROER, Dirk, J.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **KRIJN, Marcellinus, P., C., M.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **SCHOELLMANN, Volker** [DE/DE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: ELECTROPHORETIC DISPLAY PANEL



(57) Abstract: The electrophoretic display panel (1) for displaying a picture and subsequently displaying a subsequent picture has a pixel (2) having an electrophoretic medium (5) having first and second charged particles (6, 7) and an optical state depending on the positions of the particles (6, 7) in the common region (30) of the pixel (2). Furthermore, transition control means are able to control a transition of the first and the second particles (6, 7) being in substantially separated domains of in the common region (30) for displaying the picture to substantially separated domains of the common region (30) for displaying the subsequent picture. For the display panel (1) to be able to have an attainable optical state for displaying the subsequent picture which is unequal to the optical state determined by the mixture of the first and second particles (6, 7), even if the particles (6, 7) have substantially equal electrophoretic mobilities, the transition control means are further able to control the first and the second particles (6, 7) to be in substantially separated domains of the common region (30) during the transition.

WO 2005/076062 A1



Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.